



1645

RAW SEQUENCE LISTING

DATE: 02/13/2002

PATENT APPLICATION: US/09/841,963A

TIME: 15:16:37

Input Set : A:\10545-015.txt

Output Set: N:\CRF3\02132002\I841963A.raw

Does Not Comply
Corrected Diskette Needed

3 <110> APPLICANT: Watson, Dennis K.
 4 Papas, Takis S. (Deceased)
 5 Papas, Tula C. (Legal Representative)
 7 <120> TITLE OF INVENTION: Methods and compositions for the diagnosis and treatment of
 cancer

8 based on transcription factor ETS2
 10 <130> FILE REFERENCE: 10545-015-999
 12 <140> CURRENT APPLICATION NUMBER: 09/841,963A
 13 <141> CURRENT FILING DATE: 2001-04-25
 15 <150> PRIOR APPLICATION NUMBER: PCT/US99/27805
 16 <151> PRIOR FILING DATE: 1999-11-23
 18 <150> PRIOR APPLICATION NUMBER: 06/109,850 ← please edit
 19 <151> PRIOR FILING DATE: 1998-11-25
 21 <160> NUMBER OF SEQ ID NOS: 6
 23 <170> SOFTWARE: PatentIn version 3.0
 25 <210> SEQ ID NO: 1
 26 <211> LENGTH: 1894
 27 <212> TYPE: DNA
 28 <213> ORGANISM: Homo sapiens
 30 <220> FEATURE:
 31 <221> NAME/KEY: CDS
 32 <222> LOCATION: (416)..(1423)
 34 <400> SEQUENCE: 1

35	gtctgacttc	ctcccagcac	attcctgcac	tctgccgtgt	ccacactgcc	ccacagaccc	60
36	agtcctccaa	gcctgtgcgc	agctccctgc	aagccctca	ggttggcct	tgccacggtg	120
37	ccagcaggca	gccctgggct	gggggtagg	gactccctac	aggcacgcag	ccctgagacc	180
38	gccaccagcc	acccttgag	ggtggccagg	ccccagtg	ccaacctgag	tgtgctct	240
39	gccaccagcc	ctgtggccc	ctggttccgc	tgcccccca	gatgcctggc	tgagacagc	300
40	cagtggcctc	agctgccac	acctcttccc	ggccctgga	gttggcactg	cagcagacag	360
41	ctccctgggc	accaggcagc	taacagacac	agccgccagc	caaacagca	gcggc atg	418
42						Met	
43						1	
44	ggc agc gcc agc ccg ggt ctg agc agc gta tcc ccc agc cac ctc ctg						466
45	Gly Ser Ala Ser Pro Gly Leu Ser Ser Val Ser Pro Ser His Leu Leu						
46		5		10		15	
47	ctg ccc ccc gac acg gtg tgc cgg aca ggc ttg gag aag gcg gca gcg						514
48	Leu Pro Pro Asp Thr Val Ser Arg Thr Gly Leu Glu Lys Ala Ala Ala						
49		20		25		30	
50	ggg gca gtg ggt ctc gag aga cgg gac tgg agt ccc agt cca ccc gcc						562
51	Gly Ala Val Gly Leu Glu Arg Arg Asp Trp Ser Pro Ser Pro Pro Ala						
52		35		40		45	
53	acg ccc gag cag ggc ctg tcc gcc ttc gac ctc tcc tac ttt gac atg						610
54	Thr Pro Glu Gln Gly Leu Ser Ala Phe Asp Leu Ser Tyr Phe Asp Met						
55	50		55		60		65

RAW SEQUENCE LISTING

DATE: 02/13/2002

PATENT APPLICATION: US/09/841,963A

TIME: 15:16:37

Input Set : A:\10545-015.txt

Output Set: N:\CRF3\02132002\I841963A.raw

```

56 ctg tac cct gag gac agc agc tgg gca gcc aag gcc cct ggg gcc agc      658
57 Leu Tyr Pro Glu Asp Ser Ser Trp Ala Ala Lys Ala Pro Gly Ala Ser
58              70              75              80
59 agt cgg gag gag cca cct gac cag cct gag cag tgc ccg gtc att gac      706
60 Ser Arg Glu Glu Pro Pro Asp Gln Pro Glu Gln Cys Pro Val Ile Asp
61              85              90              95
62 agc caa gcc cca gcg ggc acc ctg gac ttg gtg ccc ggc ggg ctg acc      754
63 Ser Gln Ala Pro Ala Gly Thr Leu Asp Leu Val Pro Gly Gly Leu Thr
64              100             105             110
65 ttg gag gag cac tcg ctg gag cag gtg cag tcc atg gtg gtg ggc gaa      802
66 Leu Glu Glu His Ser Leu Glu Gln Val Gln Ser Met Val Val Gly Glu
67              115             120             125
68 gtg ctc aag gac atc gag acg gcc tgc aag ctg ctc aac atc acc gca      850
69 Val Leu Lys Asp Ile Glu Thr Ala Cys Lys Leu Leu Asn Ile Thr Ala
70 130             135             140             145
71 gat ccc atg gac tgg agc ccc agc aat gtg cag aag tgg ctc ctg tgg      898
72 Asp Pro Met Asp Trp Ser Pro Ser Asn Val Gln Lys Trp Leu Leu Trp
73              150             155             160
74 aca gag cac caa tac cgg ctg ccc ccc atg ggc aag gcc ttc cag gag      946
75 Thr Glu His Gln Tyr Arg Leu Pro Pro Met Gly Lys Ala Phe Gln Glu
76              165             170             175
77 ctg gcg ggc aag gag ctg tgc gcc atg tcg gag gag cag ttc cgc cag      994
78 Leu Ala Gly Lys Glu Leu Cys Ala Met Ser Glu Glu Gln Phe Arg Gln
79              180             185             190
80 cgc tcg ccc ctg ggt ggg gat gtg ctg cac gcc cac ctg gac atc tgg      1042
81 Arg Ser Pro Leu Gly Gly Asp Val Leu His Ala His Leu Asp Ile Trp
82              195             200             205
83 aag tca gcg gcc tgg atg aaa gag cgg act tca cct ggg gcg att cac      1090
84 Lys Ser Ala Ala Trp Met Lys Glu Arg Thr Ser Pro Gly Ala Ile His
85 210             215             220             225
86 tac tgt gcc tcg acc agt gag gag agc tgg acc gac agc gag gtg gac      1138
87 Tyr Cys Ala Ser Thr Ser Glu Glu Ser Trp Thr Asp Ser Glu Val Asp
88              230             235             240
89 tca tca tgc tcc ggg cag ccc atc cac ctg tgg cag ttc ctc aag gag      1186
90 Ser Ser Cys Ser Gly Gln Pro Ile His Leu Trp Gln Phe Leu Lys Glu
91              245             250             255
92 ttg cta ctc aag ccc cac agc tat ggc cgc ttc att agt tgg ctc aac      1234
93 Leu Leu Leu Lys Pro His Ser Tyr Gly Arg Phe Ile Arg Trp Leu Asn
94              260             265             270
95 aag gag aag ggc atc ttc aaa att gag gac tca gcc cag gtg gcc cgg      1282
96 Lys Glu Lys Gly Ile Phe Lys Ile Glu Asp Ser Ala Gln Val Ala Arg
97              275             280             285
98 ctg tgg ggc atc cgc aag aac cgt ccc gcc atg aac tgc gac aag ctg      1330
99 Leu Trp Gly Ile Arg Lys Asn Arg Pro Ala Met Asn Cys Asp Lys Leu
100 290             295             300             305
101 agc cgc tcc atc cgc cag tct tac aag aag ggc atc atc cgg aag cca      1378
102 Ser Arg Ser Ile Arg Gln Ser Tyr Lys Lys Gly Ile Ile Arg Lys Pro
103              310             315             320
104 gac atc tcc cag cgc ctc gtc tac cag ttc gtg cac ccc atc tga      1423

```

RAW SEQUENCE LISTING

DATE: 02/13/2002

PATENT APPLICATION: US/09/841,963A

TIME: 15:16:37

Input Set : A:\10545-015.txt

Output Set: N:\CRF3\02132002\I841963A.raw

```

105 Asp Ile Ser Gln Arg Leu Val Tyr Gln Phe Val His Pro Ile
106          325          330          335
107 gtgcctggcc cagggcctga aaccgcgcct caggggcctc tctcctgcct gccctgcctc 1483
108 agccaggccc tgagatgggg gaaaacgggc agtgtgtctt gctgctctga ccttcacagag 1543
109 cccaaggtca gggaggggca accaactgcc ccagggggat atgggtcttc tggggccttc 1603
110 gggaccatgg ggcaggggtg ctctctcttc aggccagct gctcccctgg aggacagagg 1663
111 gagacagggc tgctcccaa cacctgcctc tgaccccagc atttcacagag cagagcctac 1723
112 agaagggcag tgactcgaca aaggccacag gcagtccagg cctctctctg ctccatcccc 1783
113 ctgcctccca ttctgcacca cacctggcat ggtgcaggga gacatctgca cccctcagtt 1843
114 gggcagccag gagtgcctcc gggaatggat aataaagata ctagagaact g 1894
116 <210> SEQ ID NO: 2
117 <211> LENGTH: 335
118 <212> TYPE: PRT
119 <213> ORGANISM: Homo sapiens
121 <400> SEQUENCE: 2
122 Met Gly Ser Ala Ser Pro Gly Leu Ser Ser Val Ser Pro Ser His Leu
123 1          5          10          15
125 Leu Leu Pro Pro Asp Thr Val Ser Arg Thr Gly Leu Glu Lys Ala Ala
126          20          25          30
128 Ala Gly Ala Val Gly Leu Glu Arg Arg Asp Trp Ser Pro Ser Pro Pro
129          35          40          45
131 Ala Thr Pro Glu Gln Gly Leu Ser Ala Phe Asp Leu Ser Tyr Phe Asp
132          50          55          60
134 Met Leu Tyr Pro Glu Asp Ser Ser Trp Ala Ala Lys Ala Pro Gly Ala
135 65          70          75          80
137 Ser Ser Arg Glu Glu Pro Pro Asp Gln Pro Glu Gln Cys Pro Val Ile
138          85          90          95
140 Asp Ser Gln Ala Pro Ala Gly Thr Leu Asp Leu Val Pro Gly Gly Leu
141          100          105          110
143 Thr Leu Glu Glu His Ser Leu Glu Gln Val Gln Ser Met Val Val Gly
144          115          120          125
146 Glu Val Leu Lys Asp Ile Glu Thr Ala Cys Lys Leu Leu Asn Ile Thr
147          130          135          140
149 Ala Asp Pro Met Asp Trp Ser Pro Ser Asn Val Gln Lys Trp Leu Leu
150 145          150          155          160
152 Trp Thr Glu His Gln Tyr Arg Leu Pro Pro Met Gly Lys Ala Phe Gln
153          165          170          175
155 Glu Leu Ala Gly Lys Glu Leu Cys Ala Met Ser Glu Glu Gln Phe Arg
156          180          185          190
158 Gln Arg Ser Pro Leu Gly Gly Asp Val Leu His Ala His Leu Asp Ile
159          195          200          205
161 Trp Lys Ser Ala Ala Trp Met Lys Glu Arg Thr Ser Pro Gly Ala Ile
162          210          215          220
164 His Tyr Cys Ala Ser Thr Ser Glu Glu Ser Trp Thr Asp Ser Glu Val
165 225          230          235          240
167 Asp Ser Ser Cys Ser Gly Gln Pro Ile His Leu Trp Gln Phe Leu Lys
168          245          250          255
170 Glu Leu Leu Leu Lys Pro His Ser Tyr Gly Arg Phe Ile Arg Trp Leu
171          260          265          270

```

RAW SEQUENCE LISTING

DATE: 02/13/2002

PATENT APPLICATION: US/09/841,963A

TIME: 15:16:37

Input Set : A:\10545-015.txt

Output Set: N:\CRF3\02132002\I841963A.raw

```

173 Asn Lys Glu Lys Gly Ile Phe Lys Ile Glu Asp Ser Ala Gln Val Ala
174          275          280          285
176 Arg Leu Trp Gly Ile Arg Lys Asn Arg Pro Ala Met Asn Cys Asp Lys
177          290          295          300
179 Leu Ser Arg Ser Ile Arg Gln Ser Tyr Lys Lys Gly Ile Ile Arg Lys
180 305          310          315          320
182 Pro Asp Ile Ser Gln Arg Leu Val Tyr Gln Phe Val His Pro Ile
183          325          330          335
185 <210> SEQ ID NO: 3
186 <211> LENGTH: 1704
187 <212> TYPE: DNA
188 <213> ORGANISM: Mus sp.
190 <220> FEATURE:
191 <221> NAME/KEY: CDS
192 <222> LOCATION: (362)..(1336)
194 <400> SEQUENCE: 3
195 tgtccgctct gcttcccaca cctagcaccc cagcccgctg ctgccccggt gagaaccccc 60
196 agcttggggc ttgtcatggt gccagcaggt ggccctgagc ttctgacagg ggctgccta 120
197 tagacctgca ggctgaggc ctcagactca cactcaagg gcaagaggcc ctggtggccc 180
198 acctaagagc cacctctgtc cccagccctg ctgccccact gatgtctgac tgagaccag 240
199 cagtgaacct gagctgcctg cccactgcct cctcctggtc cctgaggttg gctctgccga 300
200 ggacggacga ctcttctgaa gcaggcggt aacggaagca gccccaagcc tccaccgcag 360
201 c atg ggc agt gcc agc cca ggc ctg agc aac gtg tcc ccc ggt tgc ctg 409
202 Met Gly Ser Ala Ser Pro Gly Leu Ser Asn Val Ser Pro Gly Cys Leu
203 1          5          10          15
204 cta ctg ttc cca gat gtg gca cca cga aca ggg acg gag aag gca gca 457
205 Leu Leu Phe Pro Asp Val Ala Pro Arg Thr Gly Thr Glu Lys Ala Ala
206          20          25          30
207 tca gga gca atg ggc cct gag aag cag gaa tgg agt cct agt cca ccc 505
208 Ser Gly Ala Met Gly Pro Glu Lys Gln Glu Trp Ser Pro Ser Pro Pro
209          35          40          45
210 gcc acc cct gag cag ggc ctg tct gct ttc tac ctc tct tac ttt aac 553
211 Ala Thr Pro Glu Gln Gly Leu Ser Ala Phe Tyr Leu Ser Tyr Phe Asn
212          50          55          60
213 atg tat ccc gac gat agc agc tgg gtc gcc aaa gtc ccc gag gcc cgt 601
214 Met Tyr Pro Asp Asp Ser Ser Trp Val Ala Lys Val Pro Glu Ala Arg
215 65          70          75          80
216 gcc ggg gag gac cac ccg gag gag ccc gag cag tgt ccc gtc att gac 649
217 Ala Gly Glu Asp His Pro Glu Glu Pro Glu Gln Cys Pro Val Ile Asp
218          85          90          95
219 agc cag gcc tct ggg agc acg ttg gat gag cac tcg cta gag cag gtg 697
220 Ser Gln Ala Ser Gly Ser Thr Leu Asp Glu His Ser Leu Glu Gln Val
221          100          105          110
222 caa tcg atg gtt gtg ggc gag gtc ctg aaa gat att gag acg gcc tgc 745
223 Gln Ser Met Val Val Gly Glu Val Leu Lys Asp Ile Glu Thr Ala Cys
224          115          120          125
225 aag ctt gtg aac atc aca gca gac cct ggg gac tgg agc cct ggt aac 793
226 Lys Leu Val Asn Ile Thr Ala Asp Pro Gly Asp Trp Ser Pro Gly Asn
227          130          135          140

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/841,963A

DATE: 02/13/2002

TIME: 15:16:37

Input Set : A:\10545-015.txt

Output Set: N:\CRF3\02132002\I841963A.raw

```

228 gtg cag aag tgg ctt tta tgg aca gaa cac cag tac cgg ctg cct cca      841
229 Val Gln Lys Trp Leu Leu Trp Thr Glu His Gln Tyr Arg Leu Pro Pro
230 145                               150                               155                               160
231 gca ggc aag gcc ttc cag gag ctg ggc ggt aag gag ctg tgc gcc atg      889
232 Ala Gly Lys Ala Phe Gln Glu Leu Gly Gly Lys Glu Leu Cys Ala Met
233                               165                               170                               175
234 tcc gag gaa cag ttc cgt cag cgt gca ccc ttg ggt ggg gat gta ctg      937
235 Ser Glu Glu Gln Phe Arg Gln Arg Ala Pro Leu Gly Gly Asp Val Leu
236                               180                               185                               190
237 cat gcc cac ctg gac atc tgg aag tca gcg gcc tgg atg aag gag agg      985
238 His Ala His Leu Asp Ile Trp Lys Ser Ala Ala Trp Met Lys Glu Arg
239                               195                               200                               205
240 acc tcg cct ggg acc ctt cac tac tgc gcc tcc acc agc gag gac ggc      1033
241 Thr Ser Pro Gly Thr Leu His Tyr Cys Ala Ser Thr Ser Glu Asp Gly
242                               210                               215                               220
243 tgg acg gat ggt gag gtg gac tcg tcg tgc tcc ggg cag ccc att cac      1081
244 Trp Thr Asp Gly Glu Val Asp Ser Ser Cys Ser Gly Gln Pro Ile His
245 225                               230                               235                               240
246 ctg tgg cag ttc ctg aaa gaa ctg ctg ctc aag ccc cac agc tat ggc      1129
247 Leu Trp Gln Phe Leu Lys Glu Leu Leu Leu Lys Pro His Ser Tyr Gly
248                               245                               250                               255
249 cgc ttc atc cgg tgg ggt gtg cgc aag aac cgg cca gcc atg aac tat      1177
250 Arg Phe Ile Arg Trp Gly Val Arg Lys Asn Arg Pro Ala Met Asn Tyr
251                               260                               265                               270
252 gat aaa cta aga agc tcc atc cgc tgg ctc aac aag gag aaa ggc atc      1225
253 Asp Lys Leu Arg Ser Ser Ile Arg Trp Leu Asn Lys Glu Lys Gly Ile
254                               275                               280                               285
255 ttc aaa att gag gac tca gca cag gtg gcc cga ctc cag tat tac aag      1273
256 Phe Lys Ile Glu Asp Ser Ala Gln Val Ala Arg Leu Gln Tyr Tyr Lys
257                               290                               295                               300
258 aag ggc atg att cgt aaa ccc gcc atc tct cag cgc ctt gtc tac caa      1321
259 Lys Gly Met Ile Arg Lys Pro Ala Ile Ser Gln Arg Leu Val Tyr Gln
260 305                               310                               315                               320
261 ttt gtg cat cca gtc tgagagccac agagaccaga ggcctacaac ctgccccagg      1376
262 Phe Val His Pro Val
263                               325
264 cagccactct ctggttggcc tggctctctc tgcctactct gaattcaggg gctgctggta      1436
265 tcccagaacc caaggtccca gatagacagc cactgatcta cccatacaca tgagctctct      1496
266 gggcatatac caggccccag gaagatcgag ggagctagtt cagcacacag ggactggacc      1556
267 aagtcagctc accggacagt gatgtcactg gtctctgctc ctgccacaat cctgtaccat      1616
268 atctggcatg gtgctaagag atgtctgtac cctgcgttgg gaagccaggg gtgcccctggg      1676
269 gatggataat aaagacgtaa gataactg                                1704
271 <210> SEQ ID NO: 4
272 <211> LENGTH: 325
273 <212> TYPE: PRT
274 <213> ORGANISM: Mus sp.
276 <400> SEQUENCE: 4
277 Met Gly Ser Ala Ser Pro Gly Leu Ser Asn Val Ser Pro Gly Cys Leu
278 1                               5                               10                               15

```

VERIFICATION SUMMARY

DATE: 02/13/2002

PATENT APPLICATION: US/09/841,963A

TIME: 15:16:38

Input Set : A:\10545-015.txt

Output Set: N:\CRF3\02132002\I841963A.raw